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THE TERMINATION OF THE BUCARAMANGA FAULT IN THE CORDILLERA ORIENTAL, COLOMBIA

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The Bucaramanga Fault is a large Late Tertiary strike-slip fault oriented N15W which ends in the Cordillera Oriental of Colombia. It is believed to have about 100 km of left-lateral displacement. Based on detailed mapping of its termination, regional structural cross-sections, and gravity modeling of the area, I present a model for the geometry of the fault termination. Two reverse faults oriented N30E, the Soapaga and Boyacá faults, absorb about 40 km of strike-slip displacement on a 12 km deep detachment. These faults probably originated as Jurassic normal faults which were reactivated late in the Andean Orogeny. The Soapaga Fault cross-cuts and deforms the main strand of the Bucaramanga Fault probably as a result of motion on a younger strand of the strike-slip system, the Chicamocha Fault. The Bucaramanga Fault may have developed as an escape structure in response to accelerated compression and accretion of the Chocó Block and Panamá Arc against the western margin of Colombia during Late Miocene time.